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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER
MURRAY, DANIEL C

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27OCT2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>24-47</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>24-47</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>27OCT2005</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statements submitted on 27OCT2005 have been considered by

the Examiner and made of record in the application.

Specification

2.   The specification has not been checked to the extent necessary to determine the presence of

all possible minor errors. Applicant's cooperation is requested in correcting any errors of which

applicant may become aware in the specification.

Claim Objections

3.   **Claims 33 and 43** are objected to because of the following informalities:

➢   **Claims 33 and 43** line 5, replace "1" after "network (b," with --/-- in order to maintain

consistency among references to network round trip time (see **claim 35**).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **Claims 25-32, 34-35, 37-42, and 44-45** are rejected by virtue of their dependency on **claims 24, 33, 36, and 43.**

Claims 24 and 33 state: **A method** for evaluating download performance of web pages accessible via a network comprising the steps of: providing **at least one model for predicting** a set of download performance parameters for said web pages, said at least one model including at least one optimization parameter; defining a set of same web pages; measuring said set of download performance parameters for said sample web pages; evaluating said set of download performance parameters for said sample web pages on the basis of said model for different values of said at least one optimization parameter; defining an error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said model, respectively; selecting an optimized model including a value of said at least one optimization parameter in order to reduce said error below a predetermined value; selecting a set of use web pages; and evaluating said set of download performance parameters for said selected set of use web pages on the basis of said optimized model.

A method of evaluating download times of web pages accessible via a network, comprising the steps of: evaluating said download times on the basis of at least one **model comprising a module** for evaluating the sum of: at least one first factor determined analytically on the basis of

network (b, 1) and web page (n, d, h) parameters; and a second factor being a function of an optimization parameter (λ).

Claims 36 and 43 state: **A system** for evaluating download performance of web pages accessible via a network, comprising: first **data base items defining at least one model for predicting** a set of download performance parameters for said web pages, said at least one model including at least one optimization parameter; second data base items defining a set of sample web pages; measuring tools for measuring said set of download performance parameters for said sample web pages; **a predictor** for evaluating said set of download performance parameters for said sample web pages on the basis of said model for different values of said at least one optimization parameter; an optimizer module for defining an error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said model, respectively, said optimizer module being configured for selecting an optimized model including a value of said at least one optimization parameter able to reduce said error below a predetermined value; and third data base items indicative of a selected set of use web pages, said **predictor** being configured for evaluating said set of download performance parameters for said selected set of use web pages on the basis of said optimized model.

A system for evaluating download times of web pages accessible via a network, comprising: data base items defining at least one **model** for evaluating said download times, said **model comprising a module** for evaluating the sum of: at least one first factor determined analytically on the basis of network (b, 1) and web page (n, d, h) parameters; and a second factor being a function of an optimization parameter (λ).

Claim 46 states: **A computer program product** directly loadable into the memory of a computer and **including software code** portions for performing the steps of any one of claims 24 to 34 when the product is capable of being run on a computer.

Claim 47 states: **A computer program product** directly loadable into the memory of a computer and **including software code** portions for performing the steps of claim 35 when the product is capable of being run on a computer.

Applicant's specification states (page 2 lines 29-36): According to the present invention, such an object 30 is achieved by means of a method having the features set forth in the claims that follow. The invention also relates to a corresponding system as well as to a **computer program product** directly loadable in the memory of a computer and **including software code** 35 portions for performing the method of the invention when the product is run on a computer.

Applicant's specification states (page 13 lines 30-36, page 14 lines 1-3): The predictor 30 is comprised of a module adapted for calculating the download time and the efficiency index for a given web page without actually performing any measurement.

The predictor 30 is essentially a software module 35 adapted to receive as its input data such as the network characteristics, the browser type used and the characteristics of the web page while providing as its output the download time and the efficiency index evaluated for that page.

Claims 24 and 33 and claims 36 and 43 are directed towards a method and system comprising "modules" (e.g. predictor, optimizer, etc.), models, and database items which appear to be software. **Claims 46 and 47** directed towards a computer program product including software code wherein, Applicant claims the computer program product itself rather than the memory containing the computer program product. Applicant fails to claim a proper computer readable medium and thus fails to fall within a statutory category and is thus, per se, considered software.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a)

are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or
        nonobviousness.

7.   This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and

invention dates of each claim that was not commonly owned at the time a later invention was made

in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8.   **Claims 24, 27, 30-32, 36, 39, 40-42, and 46** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Blake et al. (US Patent # 6,067,412)** in view of **Spaid (US Patent # US**

7,269,643 B2).

a) Consider **claims 24 and 36,** Blake et al. clearly show and disclose, a method and system for evaluating download performance of web pages accessible via a network comprising the steps of: providing at least one model for predicting a set of download performance parameters for said web pages, said at least one model including at least one optimization parameter (abstract, column 3 lines 51-57); measuring said set of download performance parameters for said sample web pages (abstract, column 3 lines 48-53); evaluating said set of download performance parameters for said sample web ages on the basis of said model for different values of said at least one optimization parameter (abstract, column 3 lines 60-63, column 4 lines 11-49); defining an error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said model, respectively (abstract, column 4 lines 29-38); selecting an optimized model including a value of said at least one optimization parameter in order to reduce said error below a predetermined value (abstract, column 4 lines 56-61); and evaluating said set of download performance parameters for said selected set of use web pages on the basis of said optimized model (abstract, column 4 lines 62-67 column 5 lines 1-4). However, Blake et al. does not specifically disclose web pages or defining/selecting defining a set of web pages.

Spaid shows and discloses web site quality measurement system and method, wherein Spaid discloses defining/selecting a set of web pages (abstract, column 2 lines 54-61).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate defining/selecting a set of web pages, as taught by, Spaid into the system of Blake et al. for the purpose of measuring the quality of web pages (Spaid; abstract).

b) Consider **claims 27 and 39,** and **as applied to claims 24 and 36 above,** Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein said sample web pages are selected as a statistically meaningful set of the web pages available for

downloading via said network (the pages selected for analysis are the ones to be analyzed therefore the set of web pages selected would necessarily be statistically meaningful for the purposed of analysis)(Spaid; abstract, column 2 lines 54-61).

c) Consider **claims 30 and 40,** and **as applied to claims 24 and 36 above,** Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, further comprising the steps of: defining, for each sample page in said set of sample pages, a partial error indicative of the difference between said set of download performance parameters for said sample web pages as measured and as evaluated on the basis of said model, respectively (Blake; Abstract, column 4 lines 29-38); determining from the partial errors defined for each sample page in said set of sample pages a global prediction error (Blake discloses calculating errors, while Robertson discloses evaluating single pages of a set of pages (partial) as well as the whole set of pages (global))(Blake; column 4 lines 29-38 Robertson; column 4 lines 36-55, column 6 lines 39-48); and selecting said optimized model including a value of said at least one optimization parameter minimizing said global prediction error (Blake; abstract, column 4 lines 56-61).

d) Consider **claims 31 and 41,** and **as applied to claims 30 and 40 above,** Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 30 and 40, comprising the steps of defining said global prediction error as one of a mean value (Blake; column 15 lines 24-43) and a peak value of the partial errors defined for each sample page in said set of sample pages.

e) Consider **claims 32 and 42,** and **as applied to claims 24 and 36 above,** Blake et al. as modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, comprising the step of providing different types of said at least one model for different types of said

network (each model is based on the network it is intended to model, therefore each different type

of network would have a different type of model)(Blake; abstract, column 4 lines 56-61).

f) Consider **claim 46,** and **as applied to claim 24 above,** Blake et al. as modified by

Robertson et al. clearly show and disclose, a computer program product directly loadable into the

memory of a computer and including software code portions for performing the steps of any one of

claims 24 to 34 when the product is capable of being run on a computer (Robertson; column 3 lines

55-64).

9.   **Claim 25-26 and 37-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Blake et al. (US Patent # 6,067,412) in view of **Spaid (US Patent # US 7,269,643 B2)** in further

view of **Robertson et al. (US Patent # US 6,973,490 B1).**

a) Consider **claims 25 and 37,** and **as applied to claims 24 and 36 above,** Blake et al. as

modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein

said set of download performance parameters comprises at least one parameter selected from a

group: download time for a given web page, and an efficiency index indicative of how said given

web page exploits the capacity of said network. However, Blake et al. as modified by Spaid does not

specifically disclose download performance parameters comprises download time for a given web

page.

Robertson et al. show and disclose the performance of communication systems having

remotely readable digital documents, wherein download performance parameters comprises

download time for a given web page (column 4 lines 37-55).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the

invention was made to incorporate download performance parameters comprises download time for

a given web page, as taught by, Robertson et al. into the system of Blake et al. as modified by Spaid

for the purpose of internet performance monitoring and analysis (Robertson; Abstract).

b) Consider **claims 26 and 38,** and **as applied to claims 24 and 36 above,** Blake et al. as

modified by Spaid clearly show and disclose, the method and system of claims 24 and 36, wherein

said at least one model includes at least one parameter selected from a group: the throughput of said

network, the round trip time of said network, and at least one of the type and size of each object

included in said web pages. However, Blake et al. as modified by Spaid does not specifically disclose

that the at least one model includes the parameter indicating the throughput of said network.

Robertson et al. show and disclose the performance of communication systems having

remotely readable digital documents, wherein Robertson et al. discloses including the parameter

indicating the throughput of the network.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the

invention was made to incorporate including the parameter of the throughput of the network, as

taught by, Robertson et al. into the system of Blake et al. as modified by Spaid for the purpose of

internet performance monitoring and analysis (Robertson; Abstract).

10.   **Claims 28 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blake et**

al. (US Patent # 6,067,412) in view of **Spaid (US Patent # US 7,269,643 B2)** in further view of

Garg et al. (US Patent # US 6,327,677 B1).

a) Consider **claim 28,** and **as applied to claim 24 above,** Blake et al. as modified by Spaid

clearly show and disclose, the method of claim 24, wherein said at least one model is selected by

taking into account at least one threshold related to operational parameters of said network.

However, Blake et al. as modified by Spaid does not specifically disclose by taking into account at

least one threshold related to operational parameters of said network.

Garg et al. show and disclose network monitoring systems, wherein Garg et al. discloses

taking into account at least one threshold related to operational parameters of said network (column

1 lines 50-67, column 2 lines 1-96, column 5 lines 11-26).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the

invention was made to incorporate taking into account at least one threshold related to operational

parameters of a network, as taught by, Garg et al. into the system of Blake et al. as modified by Spaid

for the purpose of monitoring network performance (Garg; column 1 lines 35-42).

b) Consider **claim 29,** and **as applied to claim 28 above,** Blake et al. as modified by Spaid

as modified by Garg et al. clearly show and disclose, the method of claim 28, comprising the steps of

providing in said network at least one server having a respective processing time and said at least

one threshold is a function of said processing time (response time)(Garg; column 1 lines 50-67,

column 2 lines 1-96, column 5 lines 11-26).

11.   **Claims 33, 35, 43, 45, and 47** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Robertson et al. (US Patent # US 6,973,490 B1)** in view of **Blake et al. (US Patent #**

6,067,412).

a) Consider **claims 33 and 43,** Robertson et al. clearly show and disclose, a method and

system of evaluating download times of web pages accessible via a network, comprising the steps of:

evaluating said download times on the basis of at least one model comprising a module for

evaluating the sum (column 4 lines 37-55) of: at least one first factor determined analytically on the

basis of network (b, 1) and web page (n, d, h) parameters (column 4 lines 37-60, column 5 lines 17-

18). However, Robertson et al. does not specifically disclose a second factor being a function of an

optimization parameter (λ).

Blake et al. show and disclose identifying changes to computer system resources to improve

performance, wherein a factor being a function of an optimization parameter (λ)(abstract, column

lines 56-61, column 16 lines 20-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the

invention was made to incorporate and optimization parameter, as taught by, Blake et al. into the

system of Robertson et al. for the purpose of improving performance (Blake; column 1 lines 7-10).

b) Consider **claims 35 and 45,** and **as applied to claims 26 or 33 and 38 or 43 above,**

Robertson et al. as modified by Blake et al. clearly show and disclose, the method and system of

claim 26 or claim 33 and 38 or 45, wherein said at least one model corresponds to the following

relationship:

$$t \approx \left(\frac{nd}{b}\right) + \left(\frac{nh}{b} + 2l + \frac{(n-1)l}{\lambda}\right)$$

where t is the total download time of the page (column 6 lines 39-48), n is the number of objects

therein (Robertson; column 6 lines 39-48), d is the average size for its objects (Robertson; column 6

lines 39-48), b is the downstream throughput (Robertson; column 5 lines 17-18), h is the dimension

of the HTTP headers (Robertson; column 8 lines 33-36), l is the network round trip time

(Robertson; abstract, column 4 lines 56-61) and λ is said at least one optimization parameter (Blake;

column 4 lines 43-55, column 6 lines 39-48, column 10 lines 47-62)(If the prior art structure is

capable of performing the intended use, then it meets the claim. Robertson et al. clearly shows the

calculation of the total download time of a web page by taking into account the various parameters

that attribute to the download time of a web page. Blake et al. disclose optimizing the performance a

system. Thus the combination of Robertson et al. with Blake et al. would have been obvious in

order to optimize the system by optimizing the download time of a web page by taking into account

the various parameters associated therewith. Therefore, the combination of Robertson et al. and

Blake et al. meet the claim.)

c) Consider **claim 47,** and **as applied to claim 35 above,** Robertson et al. as modified by

Blake et al. clearly show and disclose, a computer program product directly loadable into the

memory of a computer and including software code portions for performing the steps of claim 35

when the product is capable of being run on a computer (Robertson; column 3 lines 55-64).

12.   **Claims 34 and 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Robertson et al. (US Patent # US 6,973,490 B1) in view of **Blake et al. (US Patent # 6,067,412)**

in further view of **Castelli et al. (US Patent Publication #US 2003/0034086 A1).**

a) Consider **claims 34 and 44,** and **as applied to claims 33 and 43 above,** Robertson et al.

as modified by Blake et al. clearly show and disclose, the method and system of claims 33 and 43.

However, Robertson et al. as modified by Blake et al. does not specifically disclose said second

factor is a function of hyperbolic type.

Castelli et al. show and disclose performance evaluation in communication networks,

wherein a factor is a function of hyperbolic type (abstract, paragraph [0109]).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the

invention was made to incorporate using a hyperbolic function, as taught by, Castelli et al. into the

system of Robertson et al. as modified by Blake et al. for the purpose of evaluating the performance

(Castelli; abstract).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

> US 7,353,272 B2   > US 2003/0023712 A1   > 5,850,388
> US 6,438,592 B1   > US 2005/0038800 A1   > 6,157,618
> US 2003/0065986 A1   > 5,842,199   > 5,325,505

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to DANIEL MURRAY whose telephone number is 571-270-1773. The

examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Tonia Dollinger can be reached on (571)-272-4170. The fax phone number for the organization

where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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applications is available through Private PAIR only. For more information about the PAIR system,

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assistance from a USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DCM/
Examiner, Art Unit 2443
/Tonia LM Dollinger/
Supervisory Patent Examiner, Art Unit 2443